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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/574,638

03/31/2006

Italo Carfagnini

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GREENBERG TRAURIG LLP (LA)

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INTELLECTUAL PROPERTY DEPARTMENT

SANTA MONICA, CA 90404

EXAMINER

KRYLOVA, IRINA

ART UNIT

PAPER NUMBER

4131

MAIL DATE

DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/574,638	Applicant(s) CARFAGNINI, ITALO	
	Examiner IRINA KRYLOVA	Art Unit 4131	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 31 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☒ Claim(s) 1 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>03/31/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 1 is objected to because of the following informalities. Appropriate correction is required.

Claim 1 is objected to for the use of “particular” and “as much as almost” limitations. The claim is definite because one of ordinary skill in the art recognizes that the “particular” and “as much as almost” limitations are optional or exemplary, and not express recitations of the claims. However, such limitations have not traditionally been used in U.S. patent claims. Therefore, the examiner requests that these limitations be deleted from the claims, and inserted into new dependent claims.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-14 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

3. Claim 1 (line 3) is indefinite for the use of the phrase “it is possible to use.” The entirety of the specification indicates that the instant invention relates to the cross-linking agents as formula (I) or (II), but the phrase “it is possible to use” suggests that the cross-linking agents of formulae (I) and (II) are optional ingredients. Further

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clarification is needed as to whether the claims require or optionally allow for the inclusion of the cited cross-linking agents.

4. Claims 2-13 are rejected for failing to correct the deficiencies of claim 1.

5. Claim 14 is rejected under second paragraph 35 USC 112. Claim 14, which is dependent on claim 9, recites "magnesium and/or aluminum hydroxide are present...".

There is insufficient antecedent basis for this limitation in the claim. Claim 9 recites only aluminum hydroxide and not magnesium hydroxide.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Carfagnini** in US 4,835,204 in view of **Credali et al** in WO 2004/026957, in further view of **Yamanaka** in US 2003/0013820.

3. **Carfagnini** discloses a plasto-elastomeric composition comprising thermoplastic olefinic resins and EPDM elastomer wherein the elastomeric phase is fully or partially cross-linked by an aromatic carboxylic acid and a non-halogenated phenolic resin (Abstract). The non-halogenated phenolic resins have formulas exactly the same as discloses in claim 1 of the instant application (col. 2, lines 9-51). The aromatic acid

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comprises salicylic acid, wherein per each part by weight of resin from 0.1 to 0.8 parts by weight of salicylic acid are used (col. 2, lines 50-56).

The polyolefin resin is a product of copolymerization of olefin monomers, such as ethylene, propylene, butene-1, pentene, hexene-1, 4-methyl-1-pentene, 3-methyl-1-pentene, 3,3-dimethyl-1-butene, 3-methyl-1-hexene, 2,4,4-trimethyl-1-pentene (col. 4, lines 19-23).

The composition comprises 10-80% by weight of EPDM terpolymer (col. 2, lines 63-66). Specific example provides the ratio between EPDM and polypropylene 100:200 (Table 1).

The EPDM terpolymers consist of at least two olefinic monomers, such as ethylene, propylene, butene-1), and a conjugated or non-conjugated diene, such as ethylidene-norbornene,, 1,4-hexadiene, dicyclopentadiene, 2-methyl-1,4-pentadiene (col. 4, lines 5-11).

The plasto-elastomeric composition may include **fillers**, such as **carbonates** and **barite**). The Shore A hardness of the composition comprises 45 (Table 1).

6. Carfagnini fails to specify the amount of added filler and the value of specific gravity of the composition.

7. Credali et al discloses a composition comprises:

1) 8-25% by weight of propylene polymer or copolymer;

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2) 75-92% by weight of elastomeric fraction comprising copolymer of ethylene, propylene and conjugated or non-conjugated diene;

3) 40-80% by weight of inorganic filler (Abstract; page 6, lines 8-12).

The used inorganic fillers comprise magnesium hydroxide, aluminum hydroxide, calcium carbonate, barium sulfate (page 10, lines 7-13; page 11, lines 3-4).

Calcium carbonate with specific gravity 2.71, aluminum hydroxide with specific gravity 2.42, barium sulfate with specific gravity 4.48 are commercially available (see "Hawley's Condensed Chemical Dictionary", 14th Edition, 2002, by John Wiley & Sons Inc.)

The composition comprises **Shore A hardness lower than 85** (page 11, lines 11-20).

8. **Yamanaka** discloses a composite material comprising: ethylene-propylene-diene (EPDM) rubber, polyolefin; and an inorganic filler (abstract). The inorganic filler comprises barium sulfate ([0022]). The filler is added in ratio of 200-500 parts by weight relative to 100 parts by weight of rubber ([0011]). The composite comprises specific gravity of 1.3-1.75 (Table 3).

9. Since both **Credali et al** and **Yamanaka** recite plasto-elastomeric compositions, similar to the composition of **Carfagnini**, comprising a combination of a rubber, a polyolefin and a significant amount of inorganic filler to provide a composition having enough rigidity (see Table 3 in **Yamanaka**) and, at the same time, keeping its elastic properties, as shown by Shore A hardness value (see page 11, lines 21-26 in **Credali et al**), it would be obvious to one skilled in the art at the time of the invention was made to

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include high amount of inorganic filler into the composition of **Carfagnini** to provide a product having high rigidity and good elastic properties as well.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Kondo in WO 03/066726 discloses addition of inorganic fillers having specific gravity into rubber compositions to obtain products having great specific gravity. Isshiki et al in US 3,617,377 discloses addition of calcium carbonate having specific gravity of 2.66-2.77 into ethylene-propylene rubber composition. Tanaka in US 5,349,005 discloses rubber-plastic composition, vulcanized by phenol-formaldehyde resin, including inorganic filler to provide composition having Shore A 60 to Shore D 49. Danesi et al in US 4,477,631 discloses plasto-elastomeric composition comprising EPDM, olefinic polymer cross-linked with non-halogen phenol-formaldehyde resin, which contains a significant amount of calcium carbonate filler.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to IRINA KRYLOVA whose telephone number is (571)270-7349. The examiner can normally be reached on Monday-Friday 7:30am-5pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Sample can be reached on (571)272-1376. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/David R. Sample/
Supervisory Patent Examiner, Art Unit 4131

/I. K./
Examiner, Art Unit 4131